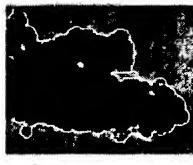


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\*Correspondence to Syed Z. Ali, The Johns Hopkins Hospital, 600 N. Wolfe Street, Path 406, Baltimore, MD 21287-6417.

**Keywords**

hepatocellular carcinoma; fibrolamellar variant; biliary brushing; fine-needle aspiration; cytopathology

**Abstract**

The fibrolamellar variant of hepatocellular carcinoma (FL-HCC) is an uncommon visceral malignancy with a distinctly better prognosis. An accurate initial diagnosis, therefore, is essential for prognostic and therapeutic reasons. This case report describes the cytomorphology of an unusual case of FL-HCC in a 13-yr-old boy who was found to have a hepatic mass with prominent intraluminal growth pattern seen predominantly in the right hepatic duct. A diagnosis of FL-HCC was originally suspected on bile duct brushings obtained during endoscopic retrograde cholangiopancreaticogram (ERCP) and subsequently confirmed on fine-needle aspiration (FNA) and surgical resection of the hepatic tumor. The cytomorphologic profile of FL-HCC is distinctive in the right clinical setting, allowing an accurate preoperative identification of this malignancy on biliary brushing or FNA. *Diagn. Cytopathol.* 2002;26:257-261. © 2002 Wiley-Liss, Inc.

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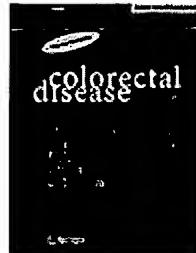


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**Accepted: 26 March 1990**

**Abstract** The succinate dehydrogenase inhibition (SDI) test was used to examine eight pairs of samples obtained simultaneously from primary colorectal cancers and metastatic liver lesions. The chemosensitivity of the metastatic lesions to six antitumour drugs, carboquone

(CQ), adriamycin (ADM), mitomycin C (MMC), aclacinomycin A (ACR), cisplatin (DDP), and 5-fluorouracil (5-FU), differed from that of the primary lesions-the metastatic lesions were less sensitive to all these drugs. There were no correlations of chemosensitivities between the primary and the metastatic lesions ( $r=-0.4331 \sim 0.4857$ ).

Thus, in patients with liver metastasis from a primary colorectal cancer, treatment with these drugs may not be so effective. When selecting antitumour drugs for metastatic liver lesions of colorectal cancer, the chemosensitivity of the primary tumour should first be assessed.

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## References

1. Higgins GA, Humphrey E, Juler GL, LeVeen HH, McCaughan J, Keehn RJ (1983) Adjuvant chemotherapy in the surgical treatment of large bowel cancer. *Cancer* 38:1461-1467
2. Davis HL (1982) Chemotherapy of large bowel cancer. *Cancer* 50:2638-2646
3. Von Hoff DD, Clark GM, Stogdill BJ, Sarosdy MF, O'Brien, Casper JT, Mattox DE, Page CP, Cruz AB, Sandbach JF (1983) Prospective clinical trial of a human tumor cloning system. *Cancer Res* 43:1926-1931

4. Fan D, Morgan LR, Schneider C, Blank H, Fan S (1984) Cooperative evaluation of human tumor chemosensitivity in the soft agar assay and its clinical correlations. *J Cancer Res Clin Oncol* 109:23-28
5. Agrez MV, Lieber MM (1983) In vitro chemotherapy sensitivity testing of primary human colorectal carcinomas. *J Surg Oncol* 22:269-272
6. Maehara Y, Anai H, Kusumoto H, Sugimachi K (1987) Poorly differentiated human gastric carcinoma is more sensitive to antitumor drugs than is well differentiated carcinoma. *Eur J Surg Oncol* 13:203-206
7. Maehara Y, Anai H, Kusumoto H, Kusumoto T, Sugimachi K (1988) Colorectal carcinoma in vitro is more sensitive to 1-hexylcarbamoyl-5-fluorouracil compared with six other antitumor drugs: carboquone, adriamycin, mitomycin C, aclacinomycin A, cisplatin, 5-fluorouracil. *Dis Col Rect* 31:62-67
8. Ekberg H, Tranberg K-G, Lundstedt C, Hanff G, Ranstam J, Jeppsson B, Bengmark S (1986) Determinants of survival after intraarterial infusion of 5-fluorouracil for liver metastases from colorectal cancer: A multivariate analysis. *J Surg Oncol* 31:246-254

9. Kanematsu T, Maehara Y, Kusumoto T, Sugimachi K (1988) Sensitivity to six antitumor drugs differs between primary and metastatic liver cancers. *Eur J Cancer Clin Oncol* 24:1511-1513
10. Von Hoff DD, Clark GM, Forseth BJ, Cowan JD (1986) Simultaneous in vitro drug sensitivity testing on tumors from different sites in the same patient. *Cancer* 58:1007-1013
11. Maehara Y, Kusumoto H, Anai H, Kusumoto T, Hiramoto Y, Sugimachi K (1987) 1-Hexylcarbamoyl-5-fluorouracil is more cytostatic than 5-fluorouracil against human tumors in vitro. *Eur J Cancer Clin Oncol* 23:1511-1515
12. Maehara Y, Kusumoto H, Kusumoto T, Anai H, Sugimachi K (1989) Tumor tissue is more sensitive to mitomycin C, carboquone, and aclacinomycin A than is adjacent normal tissue in vitro. *J Surg Oncol* 40:4-7
13. Cole SPC (1986) Rapid chemosensitivity testing of human lung tumor cells using the MTT assay. *Cancer Chemother Pharmacol* 17:259-263
14. Carmichael J, deGraff WG, Gazdar AF, Minna JD, Mitchell JB (1987) Evaluation of a tetrazolium-based

semiautomated colorimetric assay. Assessment of chemosensitivity testing. *Cancer Res* 47:936-942

15. Barranco SC, Schechter GA, Boerwinkle WR, Howell KA, Rubin NH (1983) Survival and cell cycle kinetics responses of Chinese hamster ovary cells, and clones of human adenocarcinoma of the stomach and astrocytoma to diaziquone (AZQ) in vitro. *Invest New Drugs* 1:11-20
16. Barranco SC, Haenelt BR, Gee EL (1978) Differential sensitivities of five rat hepatoma cell lines to anticancer drugs. *Cancer Res* 38:656-660
17. Hart IR, Fidler IJ (1981) The implications of tumor heterogeneity for studies on the biology and therapy of cancer metastasis. *Biochim Biophys Acta* 651:37-50
18. Heppner GH, Dexter DL, DeNucci T, Miller FR, Calabresi P (1978) Heterogeneity in drug sensitivity among tumor cell subpopulations of a single mammary tumor. *Cancer Res* 38:3758-3763
19. Schlag P, Schreml W (1982) Heterogeneity in growth pattern and drug sensitivity of primary tumor and metastases in the human tumor colony-forming assay. *Cancer Res* 42:4086-4089

20. Kemeny N, Niedzwiecki D, Shurgot B, Oderman P (1989) Prognostic variables in patients with hepatic metastases from colorectal cancer. Importance of medical assessment of liver involvement. *Cancer* 63:742-747
21. Buchwald H, Grage TB, Vassilopoulos PP, Rohde TD, Varco RL, Blackshear PJ (1980) Intraarterial infusion chemotherapy for hepatic carcinoma using a totally implantable infusion pump. *Cancer* 45:866-869
22. Niederhuber JE, Ensminger W, Gyves J, Thrall J, Walker S, Cozzi E (1984) Regional chemotherapy of colorectal cancer metastatic to the liver. *Cancer* 53:1336-1343
23. Patt YZ, McBride CM, Ames FC, Claghorn LJ, Cleary KR, Boddie AW, Charnsangavej C, Mavligit GM (1987) Adjuvant perioperative hepatic arterial mitomycin C and floxuridine combined with surgical resection of metastatic colorectal cancer in the liver. *Cancer* 59:867-873
24. Haller DG (1988) Chemotherapy in gastrointestinal malignancies. *Sem Oncol* 15:50-64
25. Shimoyama Y, Kubota T, Watanabe M, Ishibiki K, Abe O (1989) Predictability of in vivo chemosensitivity by in vitro MTT assay with

reference to the clonogenic assay. *J Surg Oncol* 41:12-18

26. Sargent JM, Taylor CG (1989) Appraisal of the MTT assay as a rapid test of chemosensitivity in acute myeloid leukaemia. *Br J Cancer* 60:206-210
27. Kusumoto H, Maehara Y, Kusumoto T, Anai H, Akazawa K, Sugimachi K (1988) Chemosensitivity differences between primary and metastatic lesions of clinical gastric cancer. *Eur J Surg Oncol* 14:685-689
28. Link KH, Aigner KR, Kuehn W, Schwemmle K, Kern DH (1986) Prospective correlative chemosensitivity testing in highdose intraarterial chemotherapy for liver metastases. *Cancer Res* 46:4837-4840
29. Kanematsu T, Inokuchi K, Sugimachi K, Furuta T, Sonoda T, Tamura S, Hasuo K (1984) Selective effects of lipiodolized antitumor agents. *J Surg Oncol* 25:218-226

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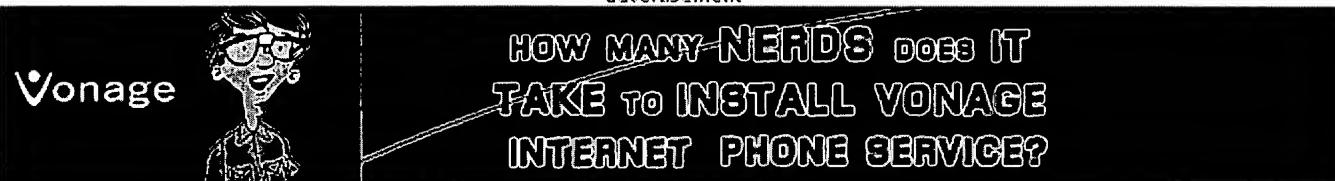
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**Hepatocellular carcinoma** accounts for 80% to 90% of all liver cancers. It occurs more often in men than women and occurs mostly in people 50 to 60 years old. The disease is more common in parts of Africa and Asia than in North and South America and Europe.

The cause of liver cancer is unknown, but contributing factors include chronic liver disease, viral hepatitis (especially hepatitis B and C), hemochromatosis, known hepatic (liver) carcinogens, and toxins (mycotoxins) found in foods in parts of Africa and Asia. The incidence is about 4 in 10,000 people.

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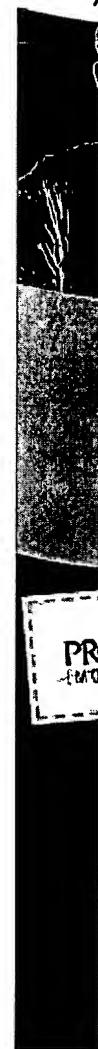
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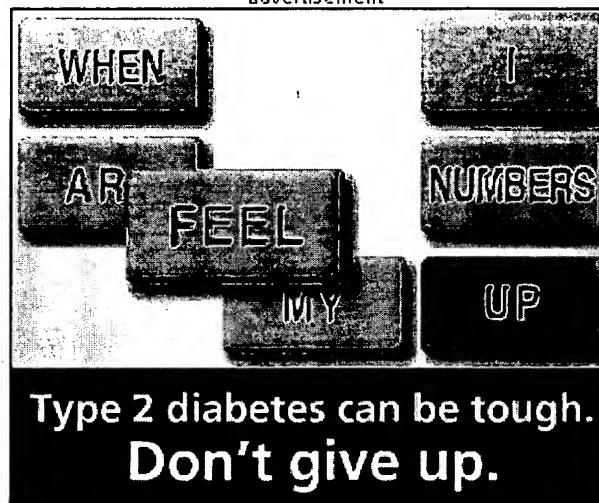
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